OIPE IAP86 AUG 28 2006 PATENT & TRADEMARK OFFICE
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PATENT

Attorney Docket No.: 021318-002410US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Stephen Brown et al.

Application No.: 10/762,829

Filed: January 21, 2004

For: METHOD AND APPARATUS FOR HANDLING VIDEO COMMUNICATION ERRORS

Customer No.: 20350

Confirmation No. 6128

Examiner: Christopher C. Grant

Technology Center/Art Unit: 2623

PETITION TO MAKE SPECIAL FOR NEW APPLICATION PURSUANT TO 37 C.F.R. § 1.102(d) & M.P.E.P. § 708.02, Item VIII, ACCELERATED EXAMINATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a petition to make special the above-identified application in accordance with MPEP § 708.02, Item VIII, accelerated examination. The application has not received any examination by the Examiner.

(A) The Commissioner is authorized to charge the petition fee of $130 under 37 C.F.R. § 1.17(h), and any additional fees that may be associated with this petition may be charged to Deposit Account No. 20-1430.

(B) All the claims are believed to be directed to a single invention. If the Examiner determines that all the claims presented are not obviously directed to a single invention, then Applicants will make an election without traverse as a prerequisite to the grant of special status where the specific grouping of claims will be determined by the Examiner.

(C) A pre-examination search was performed by an independent patent search firm. The search was made in at least the following IPC classes: G06 and H04. The search was also made in at least the following U.S. classes (indicated in bold lettering) and subclasses: **348**/014.05; **348**/014.08; **348**/014.09; **348**/014.12; **455**/003.01; **455**/403; **455**/550.1; **455**/553.1;

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709/226; **709**/246; **725**/062; **725**/091; **725**/114; **725**/120; **725**/136; and **725**/138. In addition, the following databases were searched using the keywords listed below:

Databases:

- MicroPatent: For full text of U.S., EP, PCT, Great Britain, and English abstracts of German patent records as well as the front page of JP patent documents
- IEEE Xplore: IEEE Journals and Conference Papers
- ACM Digital Library: For papers published by ACM
- Citeseer: For scientific literature in computer and information science
- Google Scholar: For journals in various fields
- IP.Com: For journals in various fields
- Global spec: For various technical journals, patent publications, products, etc.

Keywords:

- (multimedia or transcod*) adj2 gateway AND FILING DATE: <20030616
- (video) and ((multimedia or transcod*) adj2 gateway) and (I adj3 frame) AND FILING DATE: <20030616
- (video or (video adj2 bitstream) or (video adj (mail* or messag*)) or (mobile adj3 terminal*)) and ((multimedia or transcod*) adj2 gateway) and(error* or problem* or corrupt*)and (handl* or reduc* or minimis* or check* or detect*) and (encod* or decod* or retransmi* or transmi* or resend*) and ((I adj3 frame) or (video adj fast adj update)) AND FILING DATE: <20030616
- ((multimedia or transcod*) adj2 gateway) US or Any IPC: 725120 or 725062 or 725091 or 725114 or 725120 or 725136 or 725138 or 45500301 or 455403 or 455550 or 4555531 or 34801409 or 34801412 or 709226 or 709246 or 34801408 or 34801405 or G06F* or H04N* AND FILING DATE: <20030616
- ((multimedia or transcod*) adj2 gateway) and (video) US or Any IPC: 725120 or 725062 or 725091 or 725114 or 725120 or 725136 or 725138 or 45500301 or 455403 or 455550 or 4555531 or 34801409 or 34801412 or 709226 or 709246 or 34801408 or 34801405 or G06 or H04 AND FILING DATE: <20030616
- ((multimedia or transcod*) adj2 gateway) and (video) and ((I adj3 frame)or (encod* or decod*)) US or Any IPC: 725120 or 725062 or 725091 or 725114 or 725120 or 725136 or 725138 or 45500301 or 455403 or 455550 or 4555531 or 34801409 or 34801412 or 709226 or 709246 or 34801408 or 34801405 or G06 or H04 AND FILING DATE: <20030616
- ((transcod* or multimedia)adj3 gateway)and (reduc* or correct* or stablis* or solv* or deal* or check*) and (video and (error or corrup*)) US or Any IPC: 725120 or 725062 or 725091 or 725114 or 725120 or 725136 or 725138 or 45500301 or 455403 or 455550 or 4555531 or 34801409 or 34801412 or 709226 or 709246 or 34801408 or 34801405 or G06 or H04 AND Filing Date: <20030616

- ((transcod* or multimedia)and gateway)and (reduc* or correct* or stablis* or solv* or deal* or check*) and (video and (error or corrup*))
- ((multimedia or transcod*) and gateway) and (video or (mobile and terminal*)) and(error* or corrupt*) and (handl* or reduc* or minimis* or check* or detect*) and (encod* or decod* or retransmi* or transmi* or resend*) and ("I frame" or "video fast update")
- ((multimedia or transcoding) w/2 gateway) and (video) and (error or corruption) and (I w/3 frame) and (encode or decode)
- (video w/2 fast w/2 update) and (multimedia gateway or transcoding gateway).
- (multimedia or transcoding) w/2 gateway
- (Moshe w/1 Elbaz) or (Eshkoli w/1 Noam) or (Yona w/1 Ilan) or (Eiesenberg w/1 Aviv) or (Hughes w/1 John) or (Brunt w/1Stephen w/1 Mark) or (Kadir w/1 Timor)
- (multimedia gateway) + (transcoding gateway) + (video)+ (retransmission +I frame)
- ((multimedia or transcoding) near2 gateway) and (video) and (error or corruption) and ("I frame" or "video fast update") Published Before: June 16, 2003
- (multimedia gateway or transcoding gateway) and (video) and (error or corruption or "I frame" or "video fast update"))

Additional searches were performed for the assignee names and inventor (author) names identified using keyword searching and other search strategies.

A copy of the search report is provided herewith as Exhibit A.

The references listed in the search report have been included in a second Supplemental Information Disclosure Statement submitted herewith.

No inference should be made that these references are prior art for purposes under 35 U.S.C. §§ 102 and 103 merely because they are cited in the present petition, the search report, or the information disclosure statements. Applicants have not made any admission that these references are prior art for purposes under 35 U.S.C. §§ 102 and 103.

In sum, the following references have been identified:

(1) U.S. Patent No.:
6,757,005

(2) UK Patent Application No:
GB 2376857 A

(3) Non-Patent Literature Documents:

Wang et al., Error control and concealment for video communication, *Proceedings of the IEEE*, Vol. 86, No. 5, May 1998, pp. 974-997.

Lei et al., Video Transcoding Gateway for Wireless Video Access, Web Link: http://citeseer.ist.psu.edu/589293.html, Publication Date: 2003.

Dogan et al., MPEG-4 video transcoder for mobile multimedia traffic planning, Centre for Commun. Syst. Res., Surrey Univ., Guildford, *Second International Conference on 3G Mobile Communication Technologies, 2001*, Conf. Publ. No. 477, Publication Date: 2001, pp. 109-113.

Dogan et al., Video transmission over mobile satellite systems, *Int. J. Satell. Commun. 2000*, Vol. 18, pp. 185-205.

(D) Copies of all references referred to herein are enclosed herewith, collectively as Exhibit B.

(E) Set forth below is a detailed discussion of the references, pointing out with particularity how the claimed subject matter recited in the claims, amended according to the preliminary amendment filed herewith, is distinguishable over the references.

Claimed Subject Matter of the Present Invention

The present invention is directed to methods of establishing multimedia telecommunications.

Independent claim 4 recites an apparatus for converting video bitstream data coded using a first hybrid video codec to second bitstream data coded using a second hybrid video codec. The apparatus includes a video bitstream decoder disposed in a data path ahead of a data terminal. The video bitstream decoder is operative to decode the video bitstream data. The apparatus also includes an encoder coupled to the video bitstream decoder for re-encoding a plurality of macroblocks. Each of the plurality of macroblocks is re-encoded as an intra coded macroblock upon receipt of a video-fast-update request. Dependent claims 6 - 9 and 18 - 28 recite specific aspects of the present invention.

Independent claim 11 recites a method for converting video bitstream data coded using a first hybrid video codec to second bitstream data coded using a second hybrid video codec. The method includes decoding the video bitstream data in a video bitstream decoder

disposed in a data path ahead of a data terminal. The method also includes re-encoding a plurality of macroblocks in a video bitstream encoder. Each of the plurality of macroblocks is re-encoded as an intra coded macroblock upon receipt of a video-fast-update request. Dependent claims 13 - 17 and 29 - 46 recite specific aspects of the present invention.

U.S. Patent No. 6,757,005

This reference describes a method and system of utilizing the decoding/encoding video resources of a Video Processing Device (VPD) by offering a distributed architecture. The distributed VPD includes a plurality of input ports and a plurality of output ports. Each input port includes an input module operative to receive a compressed video input stream, manipulate the compressed video stream into a primary stream and optionally generate a secondary data stream associated with the primary data stream.

Prior art VPDs that perform full, traditional decoding and encoding of video signals typically require specialized video processing chips. The methods and systems described by this reference reduce the computational complexity of the VPD, facilitating the use of fast, rapidly evolving digital signal processing chips, which can be significantly more versatile and less expensive than the hardware required for prior art VPDs.

This reference does not disclose at least a method or apparatus for converting video bitstream data coded using a first hybrid video codec to second bitstream data coded using a second hybrid video codec. The method including decoding the video bitstream data in a video bitstream decoder disposed in a data path ahead of a data terminal. The method also including re-encoding a plurality of macroblocks, wherein each of the plurality of macroblocks is re-encoded as an intra coded macroblock upon receipt of a video-fast-update request.

Moreover, this reference does not provide the benefits available through embodiments of the present invention, including a gateway adapted to locally process a video-fast-update request, providing, for example, reductions in the duration of video corruption and a better user experience.

Hence the above reference does not disclose or suggest the present invention as recited in the pending claims.

UK Patent Application No. GB 2376857 A

This reference describes a proxy server for a multimedia communication system that acts as an intermediary between a source communication unit and a destination communication unit. A multiplexed stream transmitted from the source to the destination is received by the proxy sever, demultiplexed and the non-real-time data extracted. The extracted non-real-time data is error checked and, if required, a retransmission request is sent to the source unit, otherwise a copy of the non-real-time data is stored for possible retransmission to the destination. To minimise the delay in the end-to-end link the multiplexed stream is also forwarded immediately by the proxy server to the destination node. If the destination receives non-real-time data in error, a repeat request is made to the proxy server rather than the source unit.

This reference does not disclose at least a method or apparatus for converting video bitstream data coded using a first hybrid video codec to second bitstream data coded using a second hybrid video codec. The method including decoding the video bitstream data in a video bitstream decoder disposed in a data path ahead of a data terminal. The method also including re-encoding a plurality of macroblocks, wherein each of the plurality of macroblocks is re-encoded as an intra coded macroblock upon receipt of a video-fast-update request.

Moreover, this reference does not provide the benefits available through embodiments of the present invention, including a gateway adapted to locally process a video-fast-update request, providing, for example, reductions in the duration of video corruption and a better user experience.

Hence the above reference does not disclose or suggest the present invention as recited in the pending claims.

Wang et al., Error control and concealment for video communication

This reference describes techniques that have been developed for error control and concealment in video communication systems. These techniques are described in three categories according to the roles that the encoder and decoder play in the underlying approaches: (1) Forward error concealment includes methods that add redundancy at the source to enhance error resilience of the coded bit streams; (2) Error concealment by postprocessing refers to operations at the decoder to recover the damaged

areas based on characteristics of image and video signals; and (3) Interactive error concealment covers techniques that are dependent on a dialogue between the source and destination.

This reference does not disclose at least a method or apparatus for converting video bitstream data coded using a first hybrid video codec to second bitstream data coded using a second hybrid video codec. The method including decoding the video bitstream data in a video bitstream decoder disposed in a data path ahead of a data terminal. The method also including re-encoding a plurality of macroblocks, wherein each of the plurality of macroblocks is re-encoded as an intra coded macroblock upon receipt of a video-fast-update request.

Moreover, this reference does not provide the benefits available through embodiments of the present invention, including a gateway adapted to locally process a video-fast-update request, providing, for example, reductions in the duration of video corruption and a better user experience.

Hence the above reference does not disclose or suggest the present invention as recited in the pending claims.

Lei et al., Video Transcoding Gateway for Wireless Video Access

This reference reviews typical video transcoding architectures and applications of video transcoding techniques. This reference also describes a proposed video transcoding gateway system for intelligently transcoding pre-encoded video for different user devices and network connections. The main functions of the transcoding gateway include frame size downscaling, frame rate conversion, bit rate adaptation, and color conversion.

This reference does not disclose at least a method or apparatus for converting video bitstream data coded using a first hybrid video codec to second bitstream data coded using a second hybrid video codec. The method including decoding the video bitstream data in a video bitstream decoder disposed in a data path ahead of a data terminal. The method also including re-encoding a plurality of macroblocks, wherein each of the plurality of macroblocks is re-encoded as an intra coded macroblock upon receipt of a video-fast-update request.

Moreover, this reference does not provide the benefits available through embodiments of the present invention, including a gateway adapted to locally process a video-

fast-update request, providing, for example, reductions in the duration of video corruption and a better user experience.

Hence the above reference does not disclose or suggest the present invention as recited in the pending claims.

Dogan et al., MPEG-4 video transcoder for mobile multimedia traffic planning;

This reference describes problems associated with traffic planning for mobile video communications and proposes a video transcoder bank to resolve congestion and/or bandwidth limitations. The proposed architecture presents a layered structure of multiple video rates as required by various networks. Moreover, the reference describes an adaptive method for resolving congestion. The proposed system monitors the congestion with a feedback loop within a network and adaptively produces necessary transmission rates while providing the best available service quality.

This reference does not disclose at least a method or apparatus for converting video bitstream data coded using a first hybrid video codec to second bitstream data coded using a second hybrid video codec. The method including decoding the video bitstream data in a video bitstream decoder disposed in a data path ahead of a data terminal. The method also including re-encoding a plurality of macroblocks, wherein each of the plurality of macroblocks is re-encoded as an intra coded macroblock upon receipt of a video-fast-update request.

Moreover, this reference does not provide the benefits available through embodiments of the present invention, including a gateway adapted to locally process a video-fast-update request, providing, for example, reductions in the duration of video corruption and a better user experience.

Hence the above reference does not disclose or suggest the present invention as recited in the pending claims.

Dogan et al., Video transmission over mobile satellite systems

This reference describes error control techniques including feedback mechanisms, error concealment methods, forward error correction techniques and error resilience schemes that are examined for achieving a high integrity video transmission over a mobile satellite channel. This reference describes the application of three different error resilience algorithms, namely

Turbo codes, error-resilient entropy codes, and two-way decoding using reversible codes to a simulated mobile satellite channel.

Furthermore, this reference describes a proposed video transcoder that employs necessary translations between two video data stream syntax to achieve a low-complexity and low-delay interconnection. This transcoder works as a gateway tool which links two heterogeneous multimedia networks, such as a mobile satellite network and a land-based network, with negligible processing delay and complexity.

This reference does not disclose at least a method or apparatus for converting video bitstream data coded using a first hybrid video codec to second bitstream data coded using a second hybrid video codec. The method including decoding the video bitstream data in a video bitstream decoder disposed in a data path ahead of a data terminal. The method also including re-encoding a plurality of macroblocks, wherein each of the plurality of macroblocks is re-encoded as an intra coded macroblock upon receipt of a video-fast-update request.

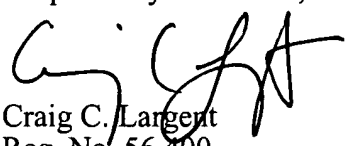
Moreover, this reference does not provide the benefits available through embodiments of the present invention, including a gateway adapted to locally process a video-fast-update request, providing, for example, reductions in the duration of video corruption and a better user experience.

Hence the above reference does not disclose or suggest the present invention as recited in the pending claims.

CONCLUSION

In view of comments presented in the present petition and claim amendments presented in the preliminary amendment filed herewith, the Examiner is respectfully requested to issue a first Office action at an early date.

Respectfully submitted,



Craig C. Largent
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Attachments
CCL/RTO/ka
60836058 v1

PTO/SB/17p (11-05)

PETITION FEE
Under 37 CFR 1.17(f), (g) & (h)
TRANSMITTAL

(Fees are subject to annual revision)

Send completed form to: Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Application Number	10/762,829
Filing Date	January 21, 2004
First Named Inventor	Stephen Brown et al.
Art Unit	2623
Examiner Name	Christopher C. Grant
Attorney Docket Number	021318-002410US

Enclosed is a petition filed under 37 CFR §1.102(d) that requires a processing fee (37 CFR 1.17(f), (g), or (h)). Payment of $ 130 is enclosed.

This form should be included with the above-mentioned petition and faxed or mailed to the Office using the appropriate Mail Stop (e.g., Mail Stop Petition), if applicable. *For transmittal of processing fees under 37 CFR 1.17(i), see form PTO/SB/17i.*

Payment of Fees (small entity amounts are NOT available for the petition fees)

☒ The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 20-1430:

☒ petition fee under 37 CFR 1.17(f), (g) or (h) ☒ any deficiency of fees and credit of any overpayments

Enclose a duplicative copy of this form for fee processing.

☐ Check in the amount of $_____ is enclosed.

☐ Payment by credit card (Form PTO-2038 or equivalent enclosed). Do not provide credit card information on this form.

Petition Fees under 37 CFR 1.17(f): Fee $400 Fee Code 1462

For petitions filed under:

§ 1.36(a) - for revocation of a power of attorney by fewer than all applicants.
§ 1.53(e) - to accord a filing date.
§ 1.57(a) - to accord a filing date.
§ 1.182 - for decision on a question not specifically provided for.
§ 1.183 - to suspend the rules.
§ 1.378(e) - for reconsideration of decision on petition refusing to accept delayed payment of maintenance fee in an expired patent.
§ 1.741(b) - to accord a filing date to an application under § 1.740 for extension of a patent term.

Petition Fees under 37 CFR 1.17(g): Fee $200 Fee Code 1463

For petitions filed under:

§ 1.12 - for access to an assignment record.
§ 1.14 - for access to an application.
§ 1.47 - for filing by other than all the inventors or a person not the inventor.
§ 1.59 - for expungement of information.
§ 1.103(a) - to suspend action in an application.
§ 1.136(b) - for review of a request for extension of time when the provisions of section 1.136(a) are not available.
§ 1.295 - for review of refusal to publish a statutory invention registration.
§ 1.296 - to withdraw a request for publication of a statutory invention registration filed on or after the date the notice of intent to publish issued.
§ 1.377 - for review of decision refusing to accept and record payment of a maintenance fee filed prior to expiration of a patent.
§ 1.550(c) - for patent owner requests for extension of time in ex parte reexamination proceedings.
§ 1.956 - for patent owner requests for extension of time in inter partes reexamination proceedings.
§ 5.12 - for expedited handling of a foreign filing license.
§ 5.15 - for changing the scope of a license.
§ 5.25 - for retroactive license.

Petition Fees under 37 CFR 1.17(h): Fee $130 Fee Code 1464

For petitions filed under:

§ 1.19(g) - to request documents in a form other than that provided in this part.
§ 1.84 - for accepting color drawings or photographs.
§ 1.91 - for entry of a model or exhibit.
✓ **§ 1.102(d)** - to make an application special.
§ 1.138(c) - to expressly abandon an application to avoid publication.
§ 1.313 - to withdraw an application from issue.
§ 1.314 - to defer issuance of a patent.

Signature — 8/23/06 Date

Craig C. Largent — Typed or printed name

56,400 — Registration No., if applicable

60853633 v1